Delete the structure of formula I and replace it with the following structure:

A

## In the claims:

Please cancel Claims 2-8, 10, 13, 17, 20-26, 29, 35, 36, 38, 39, 41-44, 52, and 71-73 and amend claims 1, 11, 15, 18, 19,

53, 56-59, and 63-70 as follows.

(Amended) A compound of the formula:

2

or a pharmaceutically acceptable salt thereof, wherein:

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represents:

wherein:

C and D are  $CR_1$ , and

E represents sulfur,

where

 $R_1$ , at each occurrence, is independently selected from the group consisting of hydrogen, halogen, cyano, halo $(C_{1-6})$  alkyl, halo $(C_{1-6})$  alkoxy, hydroxy,  $C_{1-6}$  alkyl, amino, mono and di $(C_{1-6})$  alkylamino, and  $C_{1-6}$  alkoxy; and

 $R_2$  is selected from the group consisting of hydrogen, halogen, cyano, halo( $C_1$ - $C_6$ )alkyl, halo( $C_1$ - $C_6$ )alkoxy, hydroxy,  $C_{1-6}$  alkyl, amino, and mono or di( $C_1$ - $C_6$ )alkylamino;

W is aryl which is unsubstituted or substituted with one or more  $R_3$ ; and

Q is pyridinyl, which is unsubstituted or substituted with one or more of  $R_4$ ;

R<sub>3</sub> and R<sub>4</sub> at each occurrence are independently selected from the group consisting of hydrogen, halogen, hydroxy,  $-OR_6, -NO_2, -CN, -SO_2NH_2, -SO_2NHR_6, -SO_2N(R_6)_2, \text{ amino,} \\ -NHR_6, -N(R_6)_2, -N(R_6)CO(R_4), -N(R_6)CO_2(R_6), -CONH_2, \\ -CONH(R_6), -CON(R_6)_2, -CO_2(R_6), -SO_2(R_6), -SO_2(R_6), and R_7, where In$ 

R<sub>6</sub>, at each occurrence, is independently selected from the group consisting of  $C_{1-8}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $C_{3-8}$  cycloalkyl,  $C_{3-8}$  cycloalkenyl, and  $C_{5-9}$  cycloalkynyl, each of which is unsubstituted or substituted with one or more substituents selected from the group consisting

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of hydroxy, oxo, halogen, amino,  $C_{1-8}$  alkoxy, and  $C_{1-8}$  alky,

R<sub>7</sub> at each occurrence is independently selected from the group consisting of  $C_{1-8}$  alkyl,  $C_{1-8}$  alkenyl,  $C_{1-8}$  alkynyl  $C_{3-8}$  cycloalkyl,  $C_{3-8}$  cycloalkenyl, and  $C_{5-9}$  cycloalkynyl, each of which is unsubstituted or substituted with one or more substituents selected from the group consisting of hydroxy, oxo, halogen,  $-OR_6$ ,  $C_{1-6}$ alkyl,  $-NO_2$ , -CN,  $-SO_2NH_2$ ,  $-SO_2NHR_6$ ,  $-SO_2N(R_6)_2$ , amino,  $-NHR_6$ ,  $-N(R_6)_2$ ,  $-N(R_6)CO(R_6)$ ,  $-N(R_6)CO_2(R_6)$ ,  $-CONH_2$ ,  $-CONH(R_6)$ ,  $-CON(R_6)_2$   $-CO_2H$ ,  $-CO_2(R_6)$ ,  $-S(R_6)$ ,  $-SO(R_6)$ ,  $-SO_2(R_6)$ , and  $-CO_2(R_6)$ , wherein

each  $NR_aR_b$  independently forms a monocyclic or bicyclic ring each of which may contain one or more double bonds, or one or more of oxo, O, S, SO, SO<sub>2</sub>, NH, or  $N(R_2)$ , wherein  $R_2$  is defined above and independently selected at each occurrence; or

Q is a group of the formula  $NR_8R_9$  wherein  $R_8$  and  $R_9$  are independently hydrogen or  $R_7$ ; or  $R_8$ ,  $R_9$  and the nitrogen to which they are attached form a heterocycloalkyl ring having from 5 to 8 ring atoms and where 1 or 2 of the ring atoms are selected from N, S, O, with remaining ring members being carbon, CH or  $CH_2$ , which

 $M^2$ 

heteroxycloalkyl ring is unsubstituted or substituted with one or more independently selected  $R_4$  groups; and X is  $-(CH_2)_n$ - or  $-(CH_2)_n$ (S=O)-, wherein each n is independently 1, 2, or 3.

(Amended) A compound or salt according to Claim 9, -11. wherein

W is phenyl, which is unsubstituted or substituted with from 1 to 3 substituents independently selected from halogen, hydroxy,  $C_{1-6}$ alkoxy, nitro, -CN, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sub>2</sub>,  $-SO_2N(C_{1-6}alkyl)_2$ , amino,  $-NHC_{1-6}alkyl$ ,  $-N(C_{1-6}alkyl)_2$ ,  $-N(C_{1-6}alkyl)CO(C_{1-6}alkyl)$ ,  $-N(C_{1-6}alkyl)CO_2(C_{1-6}alkyl)$ ,  $-CONH_2$ , -CONH( $C_{1-6}$ alkyl), -CON( $C_{1-6}$ alkyl)<sub>2</sub>, -CQ( $C_{1-6}$ alkyl), -S( $C_{1-6}$  $_{6}$ alkyl),  $-SO(C_{1-6}$ alkyl),  $-SO_{2}(C_{1-6}$ alkyl), and  $C_{1-6}$ alkyl optionally substituted with one or more substituents independently selected from hydroxy, halogen, and amino.

(Amended) A compound or salt according to Claim 12; (15.

wherein

Q is selected from phenyl, pyridyl, pyrimidinyl, pyrazolyl, triazolyl, imidazolyl, pyrrolyl, piperidinyl, pyrrolidinyl, each of which is unsubstituted or substituted with from 1 to 3 substituents independently selected from halogen, hydroxy,  $C_{1-\delta}$ alkoxy, -CN, amino, mono- and di( $C_{1-\delta}$  $_{6}$ ) alkylamino, and  $C_{1-6}$  alkyl which is unsubstituted or

substituted with 1 or more substituents independently chosen from hydroxy, oxo, amino, halogen,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy, and mono- and di( $C_{1-6}$ )alkylamino; and

W is phenyl which is unsubstituted or substituted with from 1 to 3 substituents independently selected from: halogen, hydroxy,  $C_{1-6}$ alkoxy, -nitro, -CN, -SO $_2$ NH $_2$ , -SO $_2$ NHR $_2$ , -SO $_2$ N ( $C_{1-6}$ alkyl) $_2$ , amino, -NHC $_1$ -\text{alkyl}, -N ( $C_{1-6}$ alkyl) $_2$ , -N ( $C_{1-6}$ alkyl) $_2$ , -N ( $C_{1-6}$ alkyl), -CONH $_2$ , -CONH( $C_{1-6}$ alkyl), -CON( $C_{1-6}$ alkyl) $_2$ , -CO $_2$ ( $C_{1-6}$ alkyl), -S( $C_{1-6}$ alkyl), -SO( $C_{1-6}$ alkyl), and  $C_{1-6}$ alkyl which is unsubstituted or substituted with one or more substituents independently selected from hydroxy, halogen, and amino.

18. (Amended) A compound or salt according to Claim 16, wherein

W is phenyl which is unsubstituted or substituted with from 1 to 3 substituents independently selected from halogen, hydroxy,  $C_{1-6}$ alkoxy, -nitro, -CN, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sub>2</sub>, -SO<sub>2</sub>N( $C_{1-6}$ alkyl)<sub>2</sub>, amino, -NHC<sub>1-6</sub>alkyl, -N( $C_{1-6}$ alkyl)<sub>2</sub>, -N( $C_{1-6}$ alkyl)CO( $C_{1-6}$ alkyl), -N( $C_{1-6}$ alkyl)CO<sub>2</sub>( $C_{1-6}$ alkyl), -CONH<sub>2</sub>, -CONH( $C_{1-6}$ alkyl), -CON( $C_{1-6}$ alkyl)<sub>2</sub>, -CO<sub>2</sub>( $C_{1-6}$ alkyl), -S( $C_{1-6}$ alkyl), -SO( $C_{1-6}$ alkyl), and  $C_{1-6}$ alkyl which is unsubstituted or substituted with one or more



substituents independently selected from hydroxy, halogen, and amino.

- 19. (Amended) A compound or salt according to Claim 18, wherein:
- Q is pyridyl, which is unsubstituted or substituted with from 1 to 3 substituents independently selected from: halogen, hydroxy,  $C_{1-6}$ alkoxy, -CN, amino, mono- and di( $C_{1-6}$ ) alkylamino, and  $C_{1-6}$  alkyl which is unsubstituted or substituted with 1 or more substituents chosen from hydroxy, oxo, amino, halogen,  $C_{1-6}$ alkoxy, and mono- and di( $C_{1-6}$ ) alkylamino; and
- W is phenyl which is unsubstituted or substituted with from 1 to 3 substituents independently selected from halogen, hydroxy,  $C_{1-6}$ alkoxy, -nitro, -CN, - $SO_2NH_2$ , - $SO_2NHR_2$ , - $SO_2N(C_{1-6}$ alkyl)<sub>2</sub>, amino, - $NHC_{1-6}$ alkyl, - $N(C_{1-6}$ alkyl)<sub>2</sub>, - $N(C_{1-6}$ alkyl), - $CON(C_{1-6}$ alkyl), and  $C_{1-6}$ alkyl which is unsubstituted or substituted with one or more substituents independently selected from hydroxy, halogen, and amino

53. (Amended) A pharmaceutical composition comprising a compound or salt according to Claim 1 combined with a pharmaceutically acceptable carrier or excipient.

detectable alteration of the electrophysiology of the cell is a change in the chloride ion conductance of the cell.

- 57. (Amended) The method of Claim 54 wherein the cell is recombinantly expressing a heterologous  $GABA_A$  receptor and the alteration of the electrophysiology of the cell is detected by intracellular recording or patch clamp recording.
- 58. (Amended) The method of claim 54 wherein the cell is a neuronal cell that is contacted in vivo in an animal, the solution is a body fluid, and the alteration in the electrophysiology of the cell is detected as a reproducible change in the animal's behavior.
- 59. (Amended) The method of Claim 58 wherein the animal is a human, the cell is a brain cell, and the fluid is cerebrospinal fluid.

<sup>63. (</sup>Amended) The method of Claim 62 in which the cell or tissue sample is a tissue section.

- 64. (Amended) The method of Claim 62 in which the detectable label is a radioactive label or a directly or indirectly luminescent label.
- 65. (Amended) The method of Claim 62 in which each cell or tissue sample is a tissue section, the detectable label is a radioactive label or a directly or indirectly luminescent label, and the detectable label is detected autoradiographically to generate an autoradiogram for each of the at least one samples.
- 66. (Amended) The method of Claim 62 in which each measurement of the amount of detectable label in a sample is carried out by viewing the autoradiograms and the comparison is a comparison of the exposure density of the autoradiograms.
- 67. (Amended) A package comprising a pharmaceutical composition of claim 53 in a container and further comprising indicia comprising at least one of:

instructions for using the composition to treat a patient suffering from an anxiety disorder, or

instructions for using the composition to treat a patient suffering from depression, or

instructions for using the composition to treat a patient suffering from a sleeping disorder.

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- 68. (Amended) A package comprising a pharmaceutical composition of claim 53 in a container and further comprising indicia comprising at least one of: instructions for using the composition to treat a patient suffering from Alzheimer's dementia or instructions for using the composition to enhance cognition in a patient.
- composition of claim 53 in a container and further comprising indicia comprising at least one of:

instructions for using the composition to treat a patient suffering from an anxiety disorder, or

instructions for using the composition to treat a patient suffering from depression, or

instructions for using the composition to treat a patient suffering from a sleeping disorder.

70. (Amended) A package comprising a pharmaceutical composition of claim 53 in a container and further comprising indicia comprising at least one of: instructions for using the composition to treat a patient suffering from Alzheimer's dementia or instructions for using the composition to enhance cognition in a patient.